Thermal assisted photosensitive composition and method thereof

Description of Technology: The present invention is directed to an improved photosensitive thick film composition with a thermal assist catalyst. The invention is further directed to a single print process utilizing such composition.

Patent Listing:

1. **US Patent No. 5,874,197**, Issued February 23, 1999, "Thermal assisted photosensitive composition and method thereof"

http://patft.uspto.gov/netacgi/nph-Parser?Sect2=PTO1&Sect2=HITOFF&p=1&u=%2Fnetahtml%2FPTO%2Fsearch-bool.html&r=1&f=G&l=50&d=PALL&RefSrch=yes&Query=PN%2F5874197

Market Potential: Photopatterning of thick film conductor compositions has long been used to achieve very fine lines (three mils or less line/space pitch) found in high density circuits. Unfortunately, the thickness or the height of lines that are achievable with photopatterning methods has been rather low. Since the metal powders found in compositions that are used in the photosensitive methods are opaque, the surface must be over-exposed to achieve crosslinking beneath the surface. The overexposure leads to the phenomena of undercut and edge curl. Upon exposure the top surface width of the patterned print is greater than the underlying regions resulting in undercut of the patterned edges during development, and subsequent edge curl when the patterned print is sintered at high temperatures.

Benefits:

- Improved achievement of very fine lines

Applications:

- Photosensitive think film composition

Contact: Ken Anderson
Director, Entrepreneurial & Small Business Support, Delaware Economic Development Office (DEDO)
Carvel State Building, 820 French Street, Wilmington, DE, 19801
Phone: (302) 577-8496, Fax: (302) 577-8499, Email: Kenneth.R.Anderson@state.de.us